## REMARKS

Applicant respectfully requests reconsideration of the present application in view of the foregoing amendments and in view of the reasons that follow.

Claims 1 and 3-17 have been amended. Support for the amendments to claim 1 can be found at least in original claim 2, which has been canceled without prejudice or disclaimer. The claims have also been amended to be in better form for U.S. practice, and to remove unnecessary reference characters. Claims 1 and 3-17 are now pending in this application.

***Examiner Interview***

Applicant appreciates the discussion with Examiner Wang in the telephonic interview of July 23, 2009, the Interview Summary of which is of record in this application. The substance of interview in the Interview Summary is correct.

***Request for Interview***

Applicant requests an Examiner Interview, prior to any further communication from the Patent Office. An Applicant Initiated Interview Request Form is attached.

***Rejection under 35 U.S.C. § 112, second paragraph***

Claims 7 and 8-13 stand rejected under 35 U.S.C. § 112, second paragraph, as being indefinite. Claim 7 has been amended to address the issue raised in the Office Action, and applicant submits that the rejection under 35 U.S.C. § 112, second paragraph has been overcome.

***Rejection under 35 U.S.C. § 103***

Claims 1-17 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. 2003/0003335 to Kazama et al. ("Kazama") in view of U.S. 2004/0001985 to Alva ("Alva"). Applicant respectfully traverses this rejection for at least the following reasons.

As an initial matter, applicant notes that the references applied in the rejection of the claims fail to disclose the control unit of claim 1, because the references fail to disclose the

structure of the control unit. The control unit in claim 1 is "configured to" perform certain functions. Such configuration of the control unit is more than mere intended use, as suggested by the Patent Office on page 5 of the Office Action, but requires structure in the control unit to perform such functions as discussed below. In other words, the control unit must be programmed or otherwise configured to perform the recited functions.

The Federal Circuit has held that a general purpose computer programmed to carry out a claimed invention creates a new machine because the general purpose computer becomes a special purpose computer once it is programmed to perform particular functions. (*See WMS Gaming Inc. v. International Game Technology*, 184 F.3d 1139, 1348, 51 USPQ2d 1385 (Fed. Cir. 1999) ("A general purpose computer, or microprocessor, programmed to carry out an algorithm creates 'a new machine, because a general purpose computer in effect becomes a special purpose computer once is programmed to perform particular functions pursuant to instructions from program software" *citing In re Allapat*, 33 F.3d 1526, 1545, 31 USPQD2d 1545, 1558 (Fed. Cir. 1994)) ("[I]f a machine is programmed in a certain new and unobvious way, it is physically different from the machine without the program; its memory elements are differently arranged." *citing In re Bernhart*, 57 C.C.P.A. 737, 417 F.2d 1395, 1399-1400, 163 USPQ 611, 615-16 (CCPA 1969))(emphasis added))).

Applicant respectfully submits that these cases demonstrate that a device, such as a control unit or computer, that is programmed or otherwise configured to perform a function as a special purpose computer or machine is not only different from a general purpose computer or machine, but that the configuration or programming of a special purpose computer or machine to perform a function provides structure that is not present in a general purpose computer or machine that lacks the same configuration or programming of the special purpose computer or machine. Therefore, such a general purpose computer or machine does not anticipate such a special purpose computer or machine because the general purpose computer or machine does not contain all of the structural features of the special purpose computer or machine.

Furthermore, the court of *In re Prater*, which was also cited by the Federal Circuit in *In re Alappat*, considered arguments that a general purpose computer could be programmed to

practice a claimed device, such as a special purpose computer. *See* 415 F.2d 1393, 1405 (C.C.P.A. 1969). The court suggested that such an analysis may be rooted in hindsight because it assumes the existence in the prior art of an applicant's discovery, not just the existence of a general purpose computer in the prior art and the ability to program it. Instead, the court noted that a proper obviousness determination under 35 U.S.C. § 103 requires an analysis of the prior art at the time that the invention was made. *Id.* at 1406. The court further stated that even if general purpose computers and typical programming techniques existed at the time of an invention, an applicant's invention is still not obvious under 35 U.S.C. § 103 if one of ordinary skill in the art did not have the knowledge of applicant's discovery because one of ordinary skill in the art would not have known what to program such a general purpose computer to do. *Id.*

Applicant respectfully submits that *In re Prater* demonstrates that it would not have been obvious to modify a prior art general purpose machine or computer to perform the function of a claimed special purpose machine or computer without a teaching or suggestion in the prior art of Applicant's invention that supports such a modification of a known general purpose machine or computer.

In view of this controlling legal authority, Applicant respectfully submits that a special purpose machine or computer that is programmed or otherwise configured to perform a function is not anticipated by a general purpose machine or computer that lacks the same configuration or programming, and that it would not have been obvious to modify such a general purpose machine or computer to have the configuration or programming of a claimed special purpose machine or computer, absent a teaching or suggestion in the prior art to do so.

In the present case, the references applied in the rejection of the claims are not configured or programmed to perform all the functions performed by the control unit of claim 1. Moreover, the Patent Office has provided no evidence that the functions that the control unit of claim 1 is configured to perform would have been obvious in view of the applied references. Thus, the references applied fail to disclose the structure of the control unit as recited, and such a structure would not have been obvious in view of the applied references.

Independent claim 1, as amended, recites:

> A fuel cell system, comprising:
> a fuel cell stack configured to provide electric power or electric current;
> a cooling unit configured to cool the fuel cell stack by flowing a coolant through a coolant passage provided in the fuel cell stack;
> an inlet temperature detecting unit configured to detect the temperature of the coolant at an inlet of the fuel cell stack; and
> *a control unit configured to control the electric power or electric current extracted from the fuel cell stack in accordance with the coolant temperature detected by the inlet temperature detecting unit and configured to set a limit value of the electric power or electric current extracted from the fuel cell stack in such a manner that the higher said coolant temperature becomes, the lower said limit value is set.*

Kazama and Alva fail to disclose or suggest at least the above italicize feature of claim 1 where the control unit is configured to "control the electric power or electric current extracted from the fuel cell stack in accordance with the coolant temperature detected by the inlet temperature detecting unit" and "to set a limit value of the electric power or electric current extracted from the fuel cell stack in such a manner that the higher said coolant temperature becomes, the lower said limit value is set."

Kazama discloses detecting the coolant temperature of a fuel stack (paragraph 0088). The maximum possible power generation of the fuel cell stack is then computed based on the detected fuel coolant temperature (paragraph 0089), where the maximum possible power generation amount is obtained based on the relation between the coolant temperature (fuel cell temperature) from the fuel cell stack and the maximum possible power generation amount shown in FIG. 13. Kazama further discloses that when an outputable power is larger than a margin load power, a control unit controls the power generation amount of a fuel stack such that the charged power becomes equal to an electric power difference between the margin load power and an outputtable power (abstract).

Kazama, however, does not disclose a control unit configured to either "control the electric power or electric current extracted from the fuel cell stack in accordance with the coolant temperature detected by the inlet temperature detecting unit" or "to set a limit value

of the electric power or electric current extracted from the fuel cell stack in such a manner that the higher said coolant temperature becomes, the lower said limit value is set." The Patent Office on page 4 of the Office Action recognizes that Kazama does not disclose the temperature sensor on the inlet side, but cites Alva for curing the deficiencies of Kazama.

Applicant submits that Alva fails to cure the deficiencies of Kazama. Alva discloses a fuel cell cooling system, and that various measured parameters such as pressure, flow rate, and temperature at the inlet and outlet of the cell may be measured and the parameters used for controlling the operations of the components of the cell (paragraph 34). Even if Kazama were modified to include an inlet coolant temperature sensor, however, Alva makes no suggestion that the Kazama control should be modified "to set a limit value of the electric power or electric current extracted from the fuel cell stack in such a manner that the higher said coolant temperature becomes, the lower said limit value is set" as recited in claim 1. Thus, even if Kazama and Alva were combined, the combination would not have all of the features of independent claim 1.

The dependent claims are patentable for at least the same reasons as independent claim 1, from which they depend either directly or indirectly, as well as for further patentable features recited therein.

Applicant believes that the present application is now in condition for allowance. Favorable reconsideration of the application as amended is respectfully requested.

The Examiner is invited to contact the undersigned by telephone if it is felt that a telephone interview would advance the prosecution of the present application.

The Commissioner is hereby authorized to charge any additional fees which may be required regarding this application under 37 C.F.R. §§ 1.16-1.17, or credit any overpayment, to Deposit Account No. 19-0741. Should no proper payment be enclosed herewith, as by a check being in the wrong amount, unsigned, post-dated, otherwise improper or informal or even entirely missing or a credit card payment form being unsigned, providing incorrect information resulting in a rejected credit card transaction, or even entirely missing, the Commissioner is authorized to charge the unpaid amount to Deposit Account No. 19-0741. If

any extensions of time are needed for timely acceptance of papers submitted herewith, Applicant hereby petitions for such extension under 37 C.F.R. §1.136 and authorizes payment of any such extensions fees to Deposit Account No. 19-0741.

Respectfully submitted,

Date 8/18/09

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